

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion is respectfully requested.

Claims 1, 3-10 and 12 are currently pending in the application. Claims 1 and 12 are amended by the present amendment. Support for amended Claims 1 and 12 can be found in the original specification, claims and the drawings.¹ Thus, no new matter is presented.

In the outstanding Official Action, Claims 1, 3-4 and 12 were rejected under 35 U.S.C. § 103(a) as anticipated by Lindsay et al. (U.S. Patent Publication No. 2002/0009070, hereinafter “Lindsay”) in view of Ida et al. (U.S. Patent Publication No. 2002/0082036, hereinafter “Ida”); and Claims 5-10 were rejected under 35 U.S.C. § 103(a) as unpatentable over Lindsay in view of Ida, and in further view of Raith (U.S. Patent No. 6,711,408, hereinafter “Raith”).

The Official Action has rejected Claims 1, 3-4 and 12 under 35 U.S.C. § 103 as being unpatentable over Lindsay in view of Ida. The Official Action cites Lindsay as disclosing the Applicants’ invention with the exception of a communication control apparatus reserving wireless resources of a selected handover destination candidate. To remedy this deficiency, the Official Action cites Ida as disclosing this claimed feature and states that it would have been obvious to one of ordinary skill in the art at the time the invention to combine these references to arrive at the Applicants’ claims. Applicants respectfully submit that amended independent Claims 1 and 12 state novel features clearly not taught or rendered obvious by Ida and/or Lindsay.

Amended Claim 1 relates to a handover control method in which a mobile station is able to request handoff between base stations when a communication quality value between the base station and the mobile station falls below a first threshold. When the communication

¹ See e.g., specification, p. 19-20, and Fig. 5.

quality falls below this threshold the communication control apparatus receives, from the mobile station, both a ***handover request*** and a ***handover history***, which identifies origination and destination base stations of previous successful handovers of the mobile station. The communication control apparatus then selects at least one handover candidate from among the base stations surrounding the mobile device ***based at least on the received handover history***, and reserves wireless resources in the selected handover candidate for use by the requesting mobile station. The control apparatus then notifies the mobile station of a handover destination candidate for which resources are reserved and the mobile station switches base stations based on the information received from the control apparatus.

Amended Claim 12 recites substantially similar features as amended Claim 1, but is directed to a “communication control apparatus”. Accordingly, Applicants submit that the arguments presented below in relation to amended Claim 1, also apply to amended Claim 12.

The requirements for a *prima facie* case of obviousness are (1) there must be some suggestion or motivation in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine the reference teachings, (2) there must a reasonable expectation of success, and (3) the prior art reference must teach or suggest all the claim limitations. It is respectfully submitted that the outstanding Official Action fails to make a *prima facie* case of obviousness, because neither Lindsay nor Ida, neither alone nor in combination, teach or suggest all the features recited in amended independent Claims 1 and 12.

Amended Claim 1 recites, *inter alia*, a handover control method, comprising:

...said communication control apparatus:
receiving a handover history from the mobile station, said handover history identifying origination and destination base stations of previous successful handovers of the mobile station;
selecting at least a handover destination candidate
communication apparatus from among communication apparatuses surrounding said communication apparatus of said communication partner ***based at least on the received handover history...***

Turning to the primary reference, Lindsay describes a method and system for conducting rapid traffic control in a TDMA system. Specifically, Lindsay describes that the user station (202) monitors a received RSSI for its current base station, and when this RSSI drops below a threshold value, the user station begins searching for a new base station.² During this search, the user station monitors the RSSI of other surrounding base stations and calculates a “preference value” corresponding to each monitored base station, and stores this “preference value” in a table.³ When the RSSI of the current base station drops below a second threshold, the user station selects the base station with the highest “preference value” from the table, and initiates handover with the selected base station.⁴

Thus, Lindsay describes that the entire process of initiating handover, and selecting an new base station is controlled internally within the user station, and fails to teach or suggest that any of the above-noted features recited in amended Claim 1. Specifically, Claim 1 recites *receiving a handover history from the mobile station, which identifies origination and destination base stations of previous successful handovers of the mobile station*. Since Lindsay describes that the selection of a desirable handover destination is controlled completely within the user station, Lindsay fails to teach or suggest that any information, much less a *handover history*, is sent from the user station to a “communication control apparatus” to assist in the selection of a handover base station candidate. Also, Lindsay fails to teach or suggest that information indicating past successful handovers is stored in the user station whatsoever.

Further, amended Claim 1 recites that the communication control apparatus *selects “at least a handover destination candidate* communication apparatus from among communication apparatuses surrounding said communication apparatus of said

² Lindsay, ¶[0228].

³ Id., ¶[0229].

⁴ Id., ¶[0230].

communication partner ***based at least on the received handover history***". As noted above, Lindsay describes that the selection of a handover destination candidate is handled within the user station itself and therefore, the "communication control apparatus" does not ***select at least a handover destination candidate***, whatsoever, much less use a ***received handover history*** to do so.

Turning to the secondary reference, Ida describes a method for performing soft handover in a code division multiple access (CDMA) mobile communication system by allowing the base transceiver station host equipment (4) to determine the better base station for communications based on the magnitude levels of the reception of the signals from the base transceiver stations (2) at the mobile station (3).⁵

However, Ida fails to teach or suggest ***receiving a handover history from the mobile station***, said handover history ***identifying origination and destination base stations of previous successful handovers of the mobile station***, as recited in amended Claim 1. Instead, as discussed above, Ida describes that the only information transmitted from the mobile station to assist in the handoff is the measured magnitude of the power levels of proximate transceiver stations, and/or location information indicating the geographic location of the mobile station.⁶ However, at no point does Ida teach or suggest that information indicating a history or successful handoffs is maintained in the mobile station, much less transmitted from the mobile station to a control apparatus.

Further, amended Claim 1 recites "***selecting at least a handover destination candidate*** communication apparatus from among communication apparatuses surrounding said communication apparatus of said communication partner ***based at least on the received handover history***". As noted above, Ida describes that a handover candidate is selected based on the location of the mobile station, and received power levels of various base transceiver

⁵ Ida, ¶[0053].

⁶ Id., ¶[0068-0081], and Fig. 2.

stations at the mobile station. At no point does Ida teach or suggest that a *handover history* is transmitted from the mobile station, much less that such information is used to determine a suitable handover destination candidate, as recited in amended Claim 1.

Accordingly, Applicants respectfully request the rejection of Claim 1 under 35 U.S.C. § 103 be withdrawn. For substantially the same reasons as given with respect to amended Claim 1, it is also submitted that amended Claim 12 patentably defines over Lindsay and/or Ida.

Claims 5-10 were rejected under 35 U.S.C. § 103(a) as unpatentable over Lindsay in view of Ida, and in further view of Raith. Applicants respectfully submit that Raith fails to cure the above-noted deficiencies of Lindsay and/or Ida, with respect to amended Claim 1.

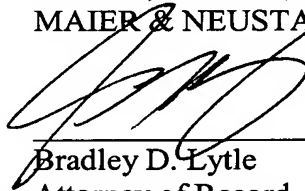
Raith describes that a location of a cellular phone is monitored, and the future path of the phone may be projected to determine a suitable handoff destination for the phone. However, Raith fails to teach or suggest “*receiving a handover history from the mobile station*, said handover history *identifying origination and destination base stations of previous successful handovers of the mobile station*” or “*selecting at least a handover destination candidate* communication apparatus from among communication apparatuses surrounding said communication apparatus of said communication partner *based at least on the received handover history*”, both features recited in amended independent Claim 1. Therefore, none of the cited references, neither alone nor in combination, teach or disclose Applicant’s Claims 5-10 which include the above-distinguished features by virtue of dependency. Therefore, the Official Action does not provide a *prime facie* case of obviousness with regard to any of these claims.

Accordingly, Applicant respectfully requests that the rejection of Claims 5-10 under 35 U.S.C. §103(a) be withdrawn.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 1, 3-10 and 12 is patentably distinguishing over the applied references. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of the application is therefore requested.

Respectfully submitted,

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